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ABSTRACT

The Performance Indicators in Education program is designed to develop methods of measuring the performance in reading and arithmetic achievement at the elementary school level of the schools of New York State. From data on file at the State Education Department, a set of profiles was developed for each of 628 school districts indicating how the district performed in elementary school reading and arithmetic. This workbook provides worksheets to aid the 100-plus districts that did not receive profiles in calculating their performance scores for the 1969-70 and 1970-71 school years. The worksheets, samples of which are provided in the appendixes, are: (1) four "Foundation Sheets" upon which the district's data are entered; (2) eight separate "Equation Worksheets" that provide a measure of one of the criteria--reading or arithmetic--for grade 3 or 6; and (3) blank "Profile of School District Characteristics" forms upon which derived measures may be recorded. A list of symbols is also provided. Uses and limitations of the profiles are discussed in the publication "Performance Indicators in Education, Local District Results--1972," which is available from the Bureau of School Programs Evaluation of the New York State Education Department. (DB)

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WORKBOOK

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The University of the State of New York/THE STATE EDUCATION DEPARTMENT
Bureau of School Programs Evaluation/Albany, New York 12224

ED 080591

PERFORMANCE INDICATORS WORKBOOK

Edition I
For Calculating School District Performance
in Elementary School Reading and Arithmetic

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of School Programs Evaluation
Albany, New York 12224
March 1973

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FOREWORD

This is one in a series of evaluative aids which the Bureau of School Programs Evaluation has produced or is producing for the use of local school personnel. The Quality Measurement Project produced two School Quality Workbooks as well as a manual describing the use of nomographs in assessing school district performance. It is hoped that this more recent series of aids, developed in the Performance Indicators in Education program, follows in that tradition. The aids include:

"Performance Indicators in Education--Local District Results--1972," which was disseminated to each of 628 districts in the State along with a profile of variables describing certain characteristics of the district and its performance on reading and arithmetic in grades 3 and 6.

"Variables Related to Student Performance and Resource Allocation Decisions at the School District Level" (1972), which surveyed the literature produced over the last 15 years concerning research into factors related to student performance. Since it was a somewhat detailed and technical report, it was disseminated to various research groups, libraries, chief State school officers, and similar groups. A summary of the results for a wider audience is described next.

"What Research Says About Improving Student Performance" is a non-technical summary of the publication described immediately above. Its publication date is spring, 1973.

"Performance Indicators in Education Telephone Survey" describes an effort to obtain systematic feedback from school districts about the reception of the Performance Indicators reports and the uses to which results have been put at the local level.

Two additional publications, scheduled for release later this year, will describe factors under the control of school officials which are related to the achievement of students in reading and arithmetic. The studies are based on samples of districts in New York State and will focus on classroom processes and school district expenditures.

This series of aids provides a multifaceted approach to school evaluation. It includes research done elsewhere, results of research done in New York State, and evaluative information related to each school district and its community.

Lorne H. Woollatt
Associate Commissioner
for Research and Evaluation

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PERFORMANCE INDICATORS WORKBOOK

The Performance Indicators in Education Program

The Performance Indicators in Education program is designed to develop methods of measuring the performance of the schools of New York State. At the present time, the major effort has been directed toward assessing performance of school districts in reading and arithmetic achievement at the elementary school level.

Data for the program were drawn from the files of the State Education Department. The data are routinely reported to the Department by local school districts through the Pupil Evaluation Program, the Basic Educational Data System, and related programs.

Through the statistical process of multiple regression analysis, the relationships between a number of variables not controlled by the school district and student achievement are obtained and expressed as an equation. The performance of a given school district is measured by solving the equation using that district's data to obtain an expected achievement score. The difference between the expected score and actual district average achievement score is attributable in part to the impact of the school. (Part of the difference may also be the result of inadequate data and to error of measurement.)

In the fall of 1972 reports were disseminated to 628 school districts in New York State. This comprised the majority of districts in the State. However, the six largest cities had been omitted because it was felt that district-wide results would have little meaning in such districts. In addition, more than 100 districts were omitted because complete data

were not available in the State Education Department's data files at the time analyses were started to develop performance scores.

The reports gave each district a set of profiles which indicated how the district performed in elementary school reading and arithmetic.

The major purpose of this workbook is to give those 100-plus districts which did not receive a report an opportunity to calculate their performance scores. In addition, some districts--among the original 628 or among the additional 100--may wish to see how changing conditions in their communities or student bodies might be expected to affect the achievement of students. This workbook could be used for that purpose.

Performance Indicators Worksheets

In order to help districts compute their performance in elementary school reading and arithmetic, several worksheets have been devised. They are designed to aid the district in determining its own performance for the 1969-70 and 1970-71 school years.

1. Four Foundation Sheets are provided upon which the district's data are entered. Then, preliminary calculations are carried out.
2. Eight separate Equation Worksheets follow. Each one provides a measure of one of the criteria--reading or arithmetic, for grade 3 or grade 6, for 1969-70 or 1970-71.
3. Blank Profile of School District Characteristics forms upon which derived measures may be recorded are provided.

A list of symbols is also provided to aid in interpreting the abbreviations

used on the foundation and equation worksheets.

Foundation Sheets

The four Foundation Sheets can be used to record the various kinds of data needed to complete the Equation Worksheets and the school district profiles.

Original data for completion of the Foundation Sheets are available in the records of the school district. PEP scores are the averages (means) reported to the school district by the Bureau of Pupil Testing. Enrollment totals, by grade or by minority group, are those reported on the Basic Educational Data System (BEDS) forms. Expenditure figures correspond to those reported on the Annual Financial Report. A formula is provided in the "derivation" column for those variables which must be calculated. The value of each variable can be recorded in the right-hand column opposite its symbol.

Equation Worksheets

After the Foundation Sheets have been completed, the variables for a given Equation Worksheet may be selected and entered in their proper sequence in the "Value of Variable" column of the Equation Worksheet. Each value is then multiplied by its corresponding coefficient and the result entered in the "Weighted Value" column. When all necessary multiplications have been accomplished, the "Weighted Values" are totalled to find the "Total" or Expected Score. Those "Weighted Values" having a negative value are indicated by minus signs and must be subtracted as the column is totalled.

As indicated earlier, the difference between the district's expected score and its actual score may be due in part to error of measurement

which exists in most testing and statistical procedures. To reduce the possibility of concluding that a difference exists when in actuality the apparent difference may be due to chance fluctuations in scores, confidence limits are established above and below the expected score. This is accomplished by adding one standard error to the expected score to obtain the upper confidence limit and by subtracting one standard error from the expected score to obtain the lower confidence limit.

If the actual score falls outside of the confidence limits, there is a two-thirds probability that the difference between the actual and expected scores is not due to chance. If the actual score is higher than the upper confidence limit, we may tentatively conclude that the district is doing well with reference to the achievement measure under consideration. That is, conditions under the control of school personnel have caused the students to achieve better than ordinarily expected, given the conditions under which the schools operate and the level of achievement of students as they entered that level of the district's educational program. The opposite conclusion may be drawn if the actual score falls below the lower confidence limit. If the actual score falls between the two confidence limits, the school district is doing about what is expected. That is, it seems to be doing an average or typical job with existing circumstances.

Profile Sheets

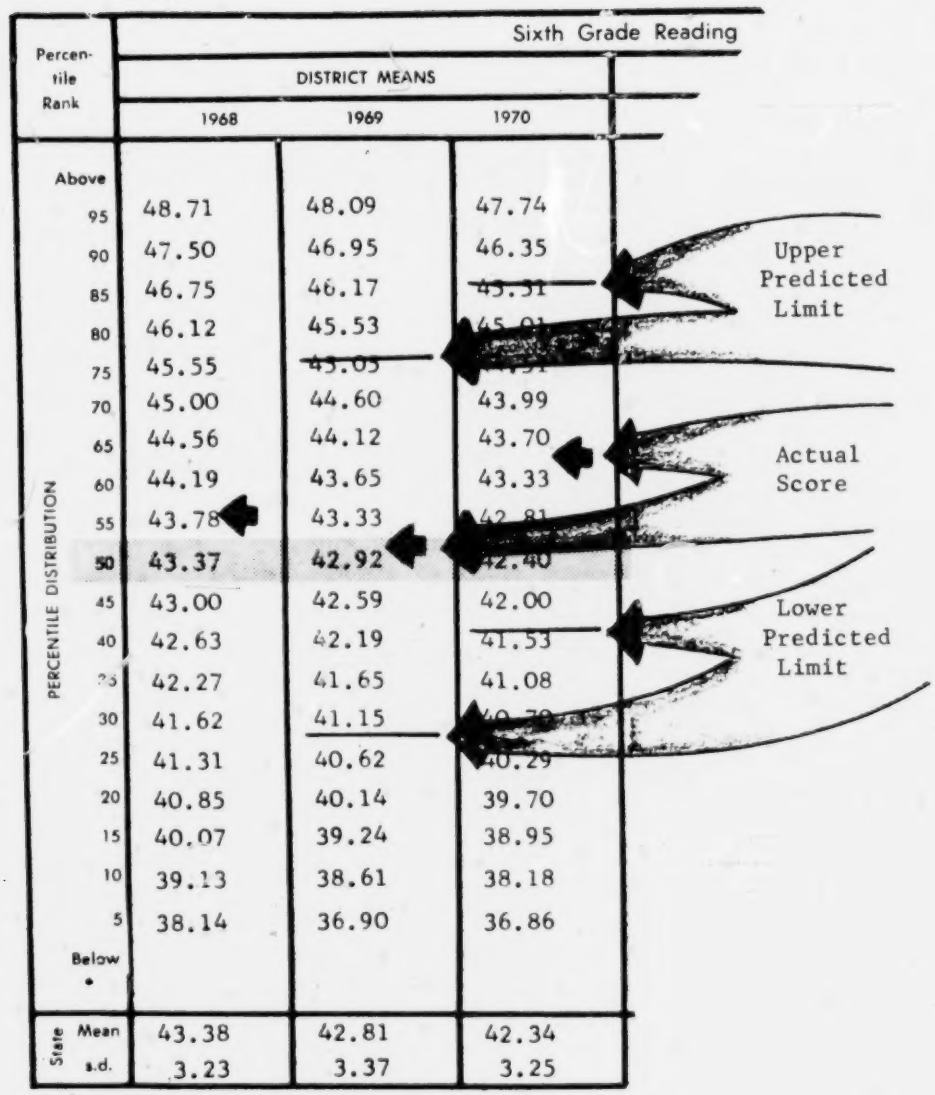
After the Equation Worksheets have been completed, the data are transferred to the Profile of School District Characteristics forms. Data from the Foundation Sheets are entered on the Profile Sheets, also. This can be done by placing an arrow in each scale indicating the value

of the variable on the Foundation Sheets. The variables are listed on the Foundation Sheets in the same order as the columns on the Profile Sheets with the exception of four Achievement Gain Scores which appear on the fourth profile sheet. These were experimental and, because they seemed to add little to the other information, have been eliminated for our purposes here.

Confidence limits for each of the eight achievement measures are taken from the bottom of the appropriate Equation Worksheets and entered as horizontal lines across each of the designated achievement scales.

A section of a Profile Sheet, illustrating the procedures described above, can be found on the next page.

Uses and limitations of the profiles are discussed in the publication, "Performance Indicators in Education, Local District Results--1972." It is available from the Bureau of School Programs Evaluation of the New York State Education Department. It will be useful to anyone calculating performance measures for his school district.



Type of information entered on Profile Sheets

APPENDIX A: FOUNDATION SHEETS

FOUNDATION SHEET 1

Symbol *	Derivation (where required)	Value
1R66		
1R67		
1R68		
1Rsd66		
1Rsd67		
1Rsd68		
3R68		
3R69		
3R70		
3Rsd68		
3Rsd69		
3Rsd70		
3A68		
3A69		
3A70		
3Asd68		
3Asd69		
3Asd70		
6R68		
6R69		
6R70		
6Rsd68		
6Rsd69		
6Rsd70		

*See appendix B for definitions of symbols.

FOUNDATION SHEET 2

Symbol	Derivation	Value
6A68		
6A69		
6A70		
6Asd68		
6Asd69		
6Asd70		
Enrol. 70	Total 1-12 Enrol. 1970	
ES 69	'69 6th Gr. Enrol. ÷ 1st Gr. Enrol.	
FTV68	(FTV '68 * 1-12 Enrol. '68) ÷ 1,000	
D68	Sq. mi. ÷ 1-12 Enrol. '68	
PR70Ppl	3rd Gr. #N + SS students '70 ÷ 3rd Gr. Enrol. '70	
PR70Stf	#N + SS staff '70 ÷ # Total staff '70	
Exp. Prin.	Exp IS Prin. ÷ '68 Enrol. 1-12	
Exp. Other	Exp IS Other ÷ '68 Enrol. 1-12	
Exp. Tch.	Exp Tch * '68 Enrol. 1-12	
Exp. Inst.	Exp Inst ÷ '68 Enrol. 1-12	
ExpCAd	Exp Cent. Ad * '68 Enrol. 1-12	
Av. 1R66,67	$\frac{1R66 + 1R67}{2}$	
Av. 1Rsd66, 67	$\frac{1Rsd66 + 1Rsd67}{2}$	
Av. 3Rsd66, 67	$\frac{3Rsd66 + 3Rsd67}{2}$	
Av. 1R67,68	$\frac{1R67 + 1R68}{2}$	

FOUNDATION SHEET 3

Symbol	Derivation	Value
Av. 1Rsd67, 68	$\frac{1Rsd67 + 1Rsd68}{2}$	
$(D68)^2$	(Sq. Mi. ÷ 1-12 Enrol. '68)^2	
G	$\frac{(1\text{-}12\ Enrol.\ '70) - (1\text{-}12\ Enrol.\ '68)}{\frac{(1\text{-}12\ Enrol.\ '70) + (1\text{-}12\ Enrol.\ '68)}{2}}$	
S68	Total 1-12 Enrol. 1968 ÷ 1,000	
3R66		
3Rsd66		
3A66		
3Asd66		
3R67		
3Rsd67		
3A67		
3Asd67		
6R66		
6A66		
6Rsd66		
6Asd66		
6R67		
6A67		
6Rsd67		
6Asd67		
1st Enrol. 69	1st grade enrollment 1969	

FOUNDATION SHEET 4

Symbol	Derivation	Value
6th Enrol. 69	6th grade enrollment 1969	
3rd Enrol. N+SS70		
3rd Enrol. Total 70		
6th Enrol. Total 70		
N+SS Staff 70		
T Staff	Total staff 1970	
Enrol. 68	Total 1-12 enrollment 1968	
Sq. mi.	Square miles in district 1971	

APPENDIX B: DEFINITIONS OF SYMBOLS

DEFINITIONS OF SYMBOLS

Symbol	Definition
1R66	First grade readiness (PEP) district average for 1966
1R67	First grade readiness (PEP) district average for 1967
1Rsd66	First grade readiness (PEP) district standard deviation for 1966
3R68	Third grade reading (PEP) district average for 1968
3Rsd69	Third grade reading (PEP) district standard deviation for 1969
6A70	Sixth grade arithmetic (PEP) district average for 1970
Enrol. 70	Total grade 1-12 enrollment in 1970
ES69	Enrollment stability*
FTV68	Full tax value or property valuation in 1968*
D68	Density of population expressed as square miles per pupil*
PR70 or PR70Ppl	Proportion of minority students*
PR70St	Proportion of minority staff*
Exp. Prin.	Per pupil expenditure for principals' salaries, equipment, supplies, and materials*
Exp. Other	Per pupil expenditure for all other supervisory staff which includes salaries, equipment, supplies, & materials*
Exp. Tch.	Per pupil expenditure for teaching includes salaries of teachers, substitutes, and noninstructional personnel along with their equipment, supplies, & materials*

*See Foundation Sheets for method of calculation.

Exp. Inst.	Per pupil expenditure for instruction for regular day school including salaries, equipment, supplies, and materials for teaching, substitute, supervisory, psychological, guidance, attendance, extra-curricular, athletic, and health personnel*
Exp. CAd.	Per pupil expenditure for central administration which includes salaries, materials, equipment, supplies, and materials of chief school administrator, curriculum development, business, research, personnel, and school-community relations staff*
Av. 1R66,67	Average of 1966 and 1967 readiness (PEP) school district mean (average) scores*
Av. 3Rsd67,68	Average of 1967 and 1968 reading (PEP) school district mean (average) standard deviations*
$(D68)^2$	Density squared
G	Growth*
3rd Enrol. N + SS 68	Number of minority students in third grade in 1968

*See Foundation Sheets for method of calculation.

APPENDIX C: EQUATION WORKSHEETS

EQUATION WORKSHEET 1

THIRD GRADE READING 1969

Var. No.	Variable Symbol	Variable Name	Coefficient		Value of Variable		Weighted Value
X_1	S68	Size 1968	.16000	x		=	
X_2	FTV68	Full Tax Value 1968	.03563	x		=	
X_3	PR70	Proportion N + SS Pupils 1970	—7.19713	x		=	—
X_4	D68	Density 1968	— .66771	x		=	—
X_5	1R66,67	Aver. Rdn. 1966 & 1967	.27843	x		=	
X_6	1Rsd66,67	Aver. Rdn. Stand. Dev. 1966 & 1967	— .13104	x		=	—
a		Constant Term					16.66

Total (Expected Score)	
Expected Score + Standard Error	2.57
Upper Confidence Limit	
Expected Score - Standard Error	2.57
Lower Confidence Limit	
Actual Score (School district average third grade reading score for 1969)	

EQUATION WORKSHEET 2

THIRD GRADE READING 1970

Var. No.	Variable Symbol	Variable Name	Coefficient		Value of Variable		Weighted
X_1	S68	Size 1968	.13000	x		=	
X_2	FTV68	Full Tax Value 1968	.02995	x		=	
X_3	PR70Ppl	Proportion N + SS Pupils 1970	-5.22140	x		=	—
X_4	D68	Density 1968	-1.61395	x		=	—
X_7	1R67,68	Aver.Rdn. 1967 & 1968	.29849	x		=	
X_8	1 Rsd67,68	Aver.Rdn. Stand. Dev. 1967 & 1968	- .11156	x		=	—
a		Constant Term					14.76

Total (Expected Score)	
Expected Score + Standard Error	2.53
Upper Confidence Limit	
Expected Score — Standard Error	2.53
Lower Confidence Limit	
Actual Score (School district average third grade reading score for 1970)	

EQUATION WORKSHEET 3

THIRD GRADE ARITHMETIC 1969

Var. No.	Variable Symbol	Variable Name	Coefficient	Value of Variable	Weighted Value
X_1	S68	Size 1968	.17000	*	
X_2	FTV68	Full Tax Value 1968	.04946	*	
X_3	PR70Ppl	Proportion N + SS Pupils 1970	-11.41959	*	-
X_4	D68	Density 1968	- 3.50241	*	-
X_9	$D68^2$	Density squared	5.24508	*	
X_{10}	(D68)(FTV68)	Density x Full Tax Value	- .10619	*	-
X_5	1R66,67	Aver. Rdn.1966 & 1967	.26865	*	
X_6	1Rsd66,67	Aver.Rdn.Stand.Dev. 1966 & 1967	- .12191	*	-
*		Constant Term			16.80

Total (Expected Score)	
Expected Score	
+ Standard Error	2.95
Upper Confidence Limit	
Expected Score	
− Standard Error	2.95
Lower Confidence Limit	
Actual Score (School district average third grade arithmetic score for 1969)	

EQUATION WORKSHEET 4

THIRD GRADE ARITHMETIC 1970

Var. No.	Variable Symbol	Variable Name	Coefficient		Value of Variable		Weighted Value
X_1	S68	Size 1968	.16000	x		=	
X_2	FTV68	Full Tax Value 1968	.04019	x		=	
X_3	PR70Ppl	Proportion N + SS Pupils 1970	−9.78807	x		=	−
X_4	D68	Density 1968	−8.48126	x		=	−
X_9	$D68^2$	Density Squared	8.73411	x		=	
X_{10}	(D68)(FTV68)	Density x Full Tax Value	− .12295	x		=	−
X_7	1R67,68	Aver.Rdn. 1967 & 1968	.29552	x		=	
X_8	1Rsd67,68	Aver.Rdn.Stand.Dev. 1967 & 1968	− .13892	x		=	−
a		Constant Term					14.94

Total (Expected Score)	
Expected Score + Standard Error	2.88
Upper Confidence Limit	
Expected Score - Standard Error	2.88
Lower Confidence Limit	
Actual Score (School district average third grade arithmetic score for 1970)	

EQUATION WORKSHEET 5

SIXTH GRADE READING 1969

Var. No.	Variable Symbol	Variable Name	Coefficient	Value of Variable	Weighted Value
X_2	FTV68	Full Tax Value 1968	.02518 x	=	
X_{11}	3R66	Third Grade Rdg. 1966	.69724 x	=	
X_{12}	3Rsd66	Third Grade Rdg.Stand. Dev. 1966	.30847 x	=	
X_3	PR70Ppl	Proportion N + SS Pupils 1970	- 7.82524 x	=	-
X_{13}	G	Growth	— 2.90045 x	=	-
X_4	D68	Density 1968	.12996 x	=	
X_9	$D68^2$	Density Squared	- .03689 x	=	—
X_5	1R66,67	Aver.Rdn. 1966 & 1967	.08357 x	=	
a		Constant Term			10.10

Total (Expected Score)	
Expected Score + Standard Error	2.10
Upper Confidence Limit	
Expected Score - Standard Error	2.10
Lower Confidence Limit	
Actual Score (School district average sixth grade reading score for 1969)	

EQUATION WORKSHEET 6

SIXTH GRADE READING 1970

Var. No.	Variable Symbol	Variable Name	Coefficient	Value of Variable	Weighted Value
X_2	FTV68	Full Tax Value 1968	.02261	x	=
X_{14}	3R67	Third Grade Reading 1967	.69287	x	=
X_{15}	3Rsd67	Third Grade Reading Stand. Dev. 1967	.41676	x	=
X_3	PR70Ppl	Proportion N + SS Pupils 1970	—8.01427	x	= —
X_{13}	G	Growth	—2.73022	x	= —
X_4	D68	Density 1968	—1.41214	x	= —
X_9	$D68^2$	Density Squared	— .42889	x	= —
X_7	1R67,68	Aver. Rdn. 1967 & 1968	.11680	x	=
a		Constant Term			6.44

Total (Expected Score)	
Expected Score + Standard Error	1.99
Upper Confidence Limit	
Expected Score - Standard Error	1.99
Lower Confidence Limit	
Actual Score (School district average sixth grade reading score for 1970)	

EQUATION WORKSHEET 7

SIXTH GRADE ARITHMETIC 1969

Var. No.	Variable Symbol	Variable Name	Coefficient		Value of Variable		Weighted Value
X_2	FTV68	Full Tax Value 1968	.02381	x		=	
X_{16}	3A66	Third Grade Arithmetic 1966	.58052	x		=	
X_{12}	3Rsd66	Third Grade Reading Stand. Dev. 1966	— .15797	x		=	—
X_{17}	3Asd66	Third Grade Arith. Stand. Dev. 1966	.44648	x		=	
X_3	PR70Ppl	Proportion N + SS Pupils 1970	—6.93003	x		=	—
X_4	D68	Density 1968	— .65395	x		=	—
X_5	1R66,67	Aver. Rdn. 1966 & 1967	.09708	x		=	
a		Constant Term					4.49

Total (Expected Score)	
Expected Score + Standard Error	2.72
Upper Confidence Limit	
Expected Score - Standard Error	2.72
Lower Confidence Limit	
Actual Score (School district average sixth grade arithmetic score for 1969)	

EQUATION WORKSHEET 8

SIXTH GRADE ARITHMETIC 1970

Var. No.	Variable Symbol	Variable Name	Coefficient		Value of Variable		Weighted Value
X_2	FTV68	Full Tax Value 1968	.01680	x		=	
X_{18}	3A67	Third Grade Arith. 1967	.61210	x		=	
X_{15}	3Rsd67	Third Grade Reading Stand. Dev. 1967	.15221	x		=	
X_{19}	3Asd67	Third Grade Arith. Stand. Dev. 1967	.21568	x		=	
X_3	PR70Ppl	Proportion N + SS Pupils 1970	—7.35324	x		=	—
X_4	D68	Density 1968	1.21735	x		=	
X_7	1R67,68	Aver. Rdn. 1967 & 1968	.10688	x		=	
a		Constant Term					.84

Total (Expected Score)	
Expected Score + Standard Error	2.56
Upper Confidence Limit	
Expected Score - Standard Error	2.56
Lower Confidence Limit	
Actual Score (School district average sixth grade arithmetic score for 1970)	

APPENDIX D: PROFILES OF SCHOOL DISTRICT CHARACTERISTICS

PROFILE OF SCHOOL DISTRICT CHARACTERISTICS

District: _____ **Code:** _____

Percentile Rank[1]	Readiness Scores[2] of First Grade Pupils						Third Grade Reading[2]		
	DISTRICT MEANS			STANDARD DEVIATIONS			DISTRICT MEANS		
	1966	1967	1968	1966	1967	1968	1968	1969	1970
PERCENTILE DISTRIBUTION									
Above 95	72.49	73.16	73.55	17.74	17.86	17.72	39.14	39.37	38.45
90	70.76	71.60	72.21	17.09	16.88	16.51	37.93	37.82	37.50
85	69.79	70.77	71.11	16.49	16.27	16.13	37.11	37.14	36.77
80	68.48	69.72	70.15	16.10	15.93	15.61	36.61	36.39	36.25
75	67.50	68.82	69.26	15.70	15.57	15.24	36.17	36.04	35.79
70	66.68	68.02	68.67	15.41	15.30	14.99	35.59	35.63	35.33
65	66.20	67.20	68.09	15.17	14.92	14.72	35.16	35.12	34.94
60	65.83	66.59	67.50	14.95	14.67	14.47	34.82	34.77	34.52
55	65.38	66.05	66.90	14.68	14.46	14.14	34.51	34.41	34.23
50	**64.76**	**65.49**	**66.33**	**14.48**	**14.19**	**13.88**	**34.09**	**34.02**	**33.84**
45	64.28	64.95	65.94	14.24	14.00	13.64	33.82	33.62	33.43
40	63.45	64.38	65.29	14.03	13.71	13.41	33.44	33.33	33.12
35	62.90	63.74	64.69	13.75	13.47	13.21	33.01	32.86	32.60
30	62.09	63.19	63.98	13.44	13.22	13.01	32.58	32.54	32.09
25	61.26	62.56	63.33	13.11	12.94	12.78	32.04	31.93	31.47
20	60.42	61.65	62.46	12.80	12.62	12.42	31.52	31.48	31.12
15	59.50	60.49	61.68	12.47	12.19	12.22	31.00	30.76	30.56
10	58.12	59.36	60.53	12.11	11.64	11.67	30.01	30.03	29.94
5	56.72	56.83	58.42	11.32	10.72	10.76	29.21	28.83	28.23
Below									
State Mean	64.55	65.49	66.32	14.50	14.28	14.18	34.20	34.01	33.73
s.d.	4.97	4.79	4.83	2.04	2.23	3.97	4.05	3.16	3.08

[1] Population of districts excludes the six largest cities and districts with incomplete data.

[2] Readiness and achievement scores were based on statewide PEP tests normally administered in October.

PROFILE OF SCHOOL DISTRICT CHARACTERISTICS

District: _____ **Code:** _____

Percentile Rank	Third Grade Reading (cont.)			Third Grade Arithmetic					
	STANDARD DEVIATIONS			DISTRICT MEANS			STANDARD DEVIATIONS		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
Above 95	12.48	12.53	12.65	39.66	39.56	39.05	10.96	13.38	13.54
90	12.09	12.10	12.27	38.88	38.36	37.71	10.57	13.02	13.00
85	11.79	11.83	11.89	38.15	37.35	36.79	10.30	12.58	12.66
80	11.61	11.60	11.66	37.60	36.63	36.13	10.07	12.36	12.48
75	11.41	11.43	11.47	37.20	36.13	35.46	9.88	12.11	12.32
70	11.25	11.29	11.31	36.79	35.52	34.83	9.71	11.96	12.16
65	11.12	11.15	11.20	36.42	34.96	34.40	9.60	11.84	12.04
60	11.02	11.03	11.09	36.12	34.50	33.98	9.46	11.72	11.93
55	10.90	10.92	10.97	35.71	34.00	33.53	9.34	11.63	11.83
50	**10.76**	**10.79**	**10.84**	**35.42**	**33.58**	**32.96**	**9.20**	**11.53**	**11.68**
45	10.63	10.67	10.73	35.14	33.20	32.50	9.05	11.39	11.55
40	10.51	10.55	10.62	34.73	32.77	32.08	8.91	11.24	11.41
35	10.35	10.42	10.46	34.38	32.25	31.62	8.78	11.10	11.27
30	10.18	10.28	10.31	33.92	31.64	31.11	8.62	10.93	11.13
25	9.93	10.09	10.16	33.42	31.14	30.68	8.51	10.75	10.99
20	9.75	9.92	9.96	32.95	30.75	30.02	8.35	10.58	10.86
15	9.57	9.73	9.80	32.29	30.06	29.22	8.18	10.43	10.57
10	9.27	9.44	9.49	31.52	29.35	28.29	8.00	10.14	10.25
5 Below	8.80	8.77	9.01	30.30	27.46	26.55	7.51	9.66	9.74
State Mean	10.83	10.75	10.82	35.38	33.63	33.04	9.34	11.49	11.65
s.d.	3.77	1.12	1.08	3.88	3.63	3.72	3.78	1.20	1.09

PERCENTILE DISTRIBUTION

PROFILE OF SCHOOL DISTRICT CHARACTERISTICS

District: _____ **Code:** _____

Percentile Rank	Sixth Grade Reading						Sixth Grade Arithmetic		
	DISTRICT MEANS			STANDARD DEVIATIONS			DISTRICT MEANS		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
Above 95	48.71	48.09	47.74	14.23	14.14	14.38	39.64	40.24	39.19
90	47.50	46.95	46.35	13.85	13.83	13.84	38.38	38.41	37.64
85	46.75	46.17	45.51	13.49	13.48	13.57	37.45	37.47	36.77
80	46.12	45.53	45.01	13.29	13.26	13.38	36.59	36.84	36.18
75	45.55	45.05	44.51	13.07	13.11	13.21	35.98	36.37	35.59
70	45.00	44.60	43.99	12.86	12.94	13.03	35.42	35.98	35.06
65	44.56	44.12	43.70	12.72	12.76	12.92	34.94	35.36	34.55
60	44.19	43.65	43.33	12.59	12.64	12.76	34.52	34.94	34.16
55	43.78	43.33	42.81	12.45	12.50	12.59	33.86	34.53	33.63
50	**43.37**	**42.92**	**42.40**	**12.34**	**12.33**	**12.48**	**33.50**	**34.17**	**33.27**
45	43.00	42.59	42.00	12.17	12.21	12.36	33.13	33.79	32.93
40	42.63	42.19	41.53	12.05	12.02	12.22	32.59	33.31	32.52
35	42.27	41.65	41.08	11.87	11.88	12.05	32.10	32.79	31.95
30	41.62	41.15	40.70	11.65	11.68	11.86	31.54	32.17	31.58
25	41.31	40.62	40.29	11.49	11.51	11.66	31.06	31.62	31.19
20	40.85	40.14	39.70	11.25	11.34	11.46	30.54	31.12	30.49
15	40.07	39.24	38.95	11.00	11.06	11.20	29.79	30.50	30.04
10	39.13	38.61	38.18	10.66	10.69	10.90	28.92	29.61	29.30
5	38.14	36.90	36.86	10.19	10.20	10.40	27.32	28.41	28.05
Below									
State Mean	43.38	42.81	42.34	12.25	12.28	12.42	33.59	34.12	33.39
s.d.	3.23	3.37	3.25	1.25	1.23	1.22	3.75	3.51	3.39

PERCENTILE DISTRIBUTION

PROFILE OF SCHOOL DISTRICT CHARACTERISTICS

District: _____ **Code:** _____

Percentile Rank	Sixth Grade Arithmetic (cont.)			Achievement Gain Scores				Surrounding Conditions	
	STANDARD DEVIATIONS			1968 (Gr. 1) to 1970 (Gr. 3)		1967 (Gr. 3) to 1970 (Gr. 6)		ENROLLMENT	
	1968	1969	1970	Reading	Arithmetic	Reading	Arithmetic	Grades 1–12	Stability[1]
Above 95	12.05	12.91	13.17	-.423	-.424	.389	.095	9657	1.278
90	11.71	12.59	12.63	-.440	-.443	.347	.052	6750	1.203
85	11.38	12.32	12.36	-.452	-.454	.324	.031	5343	1.144
80	11.21	12.06	12.14	-.459	-.463	.308	.013	4274	1.116
75	11.03	11.86	11.94	-.464	-.470	.295	.000	3633	1.079
70	10.86	11.71	11.76	-.470	-.477	.282	-.014	3101	1.052
65	10.77	11.49	11.60	-.475	-.482	.273	-.025	2770	1.031
60	10.63	11.34	11.45	-.480	-.489	.260	-.035	2392	1.000
55	10.48	11.19	11.31	-.485	-.494	.251	-.044	2069	0.978
50	10.37	11.00	11.18	-.489	-.498	.242	-.053	1786	0.964
45	10.25	10.93	11.03	-.494	-.505	.235	-.062	1553	0.943
40	10.14	10.77	10.87	-.498	-.510	.226	-.071	1399	0.926
35	10.02	10.66	10.76	-.504	-.514	.215	-.079	1258	0.906
30	9.88	10.48	10.58	-.509	-.522	.208	-.090	1134	0.887
25	9.74	10.33	10.37	-.515	-.531	.199	-.104	929	0.859
20	9.57	10.12	10.15	-.523	-.539	.188	-.116	771	0.834
15	9.40	9.88	9.96	-.532	-.549	.170	-.127	597	0.810
10	9.06	9.55	9.64	-.544	-.566	.154	-.144	456	0.784
5	8.42	9.02	9.15	-.566	-.586	.127	-.176	320	0.727
Below									
State Mean	10.36	11.06	11.16	-.490	-.501	.250	-.048	2875	0.981
s.d.	1.22	1.22	1.22	.043	.050	.084	.083	3003	0.185

PERCENTILE DISTRIBUTION

[1] Enrollment in 6th grade (1969) divided by enrollment in 1st grade (1969).

PROFILE OF SCHOOL DISTRICT CHARACTERISTICS

District:_____ **Code:** _____

Percentile Rank	Surrounding Conditions[1] (continued)				1968–69 Expenditures[1] Per Pupil				
	Property value per pupil	Square miles per pupil	Proportion of N and SS		Instructional Supervision		Teaching	Instruction (regular day)	Central administration
			Pupils	Staff	Principals	Other			
Above 95	$67.09	.251	.170	.046	$71.44	$23.71	$943.07	$1,067.11	$71.95
90	51.96	.157	.096	.022	62.45	18.74	831.18	969.72	61.77
85	43.96	.127	.059	.017	58.12	16.24	768.49	906.40	54.56
80	36.23	.100	.037	.014	54.58	12.50	731.73	839.28	50.05
75	32.63	.087	.026	.011	51.87	9.74	704.71	805.12	46.94
70	28.56	.071	.019	.008	49.26	7.46	682.48	773.14	44.93
65	26.08	.058	.014	.006	46.15	5.07	664.43	758.69	42.07
60	24.04	.050	.010	.003	43.52	2.83	645.24	743.68	39.14
55	22.56	.044	.009	.000	40.72	0.93	634.31	728.83	37.49
50	**21.03**	**.033**	**.006**	**.000**	**38.49**	**0.00**	**627.61**	**716.86**	**36.06**
45	20.05	.025	.004	.000	36.11	0.00	616.95	703.68	34.17
40	18.84	.018	.000	.000	33.47	0.00	604.93	689.74	32.93
35	17.65	.012	.000	.000	30.84	0.00	595.47	681.42	31.70
30	15.98	.008	.000	.000	27.32	0.00	586.61	671.65	29.83
25	14.84	.005	.000	.000	23.16	0.00	575.50	659.85	28.09
20	14.15	.003	.000	.000	18.48	0.00	565.36	647.53	26.39
15	13.07	.002	.000	.000	6.58	0.00	553.93	639.69	24.02
10	11.75	.001	.000	.000	0.00	0.00	541.37	625.46	21.69
5	10.03	.001	.000	.000	0.00	0.00	523.18	608.59	17.62
Below									
State Mean	27.96	.077	.034	.009	36.98	6.34	668.26	762.95	39.91
State s.d.	22.31	.198	.085	.022	21.90	11.23	173.78	187.77	19.07

PERCENTILE DISTRIBUTION

[1] See Appendix B for detailed definitions of these variables.